Appl No. 09/824,951
Reply to Office action of October 21, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-70 (Cancelled)

Claim 71 (New):   A method for selecting a master switch from a stack of switches comprising a plurality of switches, comprising:

determining whether at least one of the plurality of switches is an OSI Layer 3 switch;

selecting the master switch from the plurality of switches, responsive to the determining step by selecting the OSI Layer 3 switch with the lowest switch identification; and

selecting the master switch from the plurality of switches responsive to the determining step find no OSI Layer 3 switches by selecting a switch with the lowest identification number.

Claim 72 (New): A method according to claim 71, further comprising:

adding a new switch to the stack;

determining a topology map by the new switch;

selecting the new switch as the master switch responsive to the new switch being an OSI Layer 3 switch and no other switch on the network being an OSI Layer 3 switch.

Claim 73 (New): A method according to claim 71, further comprising:

adding a new switch to the stack;

determining a topology map by the new switch;

selecting the new switch as the master switch responsive to the new switch being an OSI Layer 3 switch having the lowest switch identification selected from a group consisting of the plurality of switches that are OSI Layer 3 switches.

Claim 74 (New): A method according to claim 71, comprising:

joining together two partitions of the stack of switches

determining whether at least one of the switches from the two partitions of the stack of switches is an OSI Layer 3 switch;

selecting the master switch from the two partitions of stack of switches, responsive to the determining step by selecting the OSI Layer 3 switch with the lowest switch identification; and

selecting the master switch from the two partitions of the stack of switches responsive to the determining step find no OSI Layer 3 switches by selecting a switch with the lowest identification number.

Claim 75 (New): A method for distributed OSI layer 3 packet processing for a stacked switch configuration having a plurality of switches, wherein at least two of the plurality of switches is an OSI Layer 3 switch and at least one of the plurality of switches is an OSI layer 2 switch, comprising:

assigning every OSI Layer 3 switch as a head router for itself; and

assigning every OSI Layer 2 switch to the OSI Layer 3 switch that is closest as a head router; and

assigning a one of the at least two OSI Layer 3 switches as a master switch for stacked switch configuration.

Claim 76 (New): A method according to claim 75, further comprising:

receiving an ARP request packet by an OSI Layer 3 switch that is not the master switch from a non-stack port;

sending a response to the ARP request packet, the response having the MAC address of the OSI Layer 3 switch as a source MAC address.

Claim 77 (New): A method according to claim 75, further comprising:

receiving an ARP request packet by a one of the OSI Layer 2 switches from a non-stack port;

sending a response to the ARP request packet, the response having the MAC address of the nearest OSI Layer 3 switch as a source MAC address.

Claim 78 (New):   A method according to claim 75, further comprising:

sending an ARP request by a one of the plurality of switches, the sending step further comprising:

broadcasting the ARP request to all other switches in the stack;

wherein the other switches are responsive to the broadcast to sending a ARP request packet to their non-stack ports, the ARP, the ARP request packet having a route interface IP address as a sender IP address and a MAC address of the header router as the sender MAC address.

Claim 79 (New): A stacked switch system having a plurality of switches, the plurality of switches comprising:

means for maintaining a local switch database, the local switch database comprising the MAC address and port identification of MAC addresses learned locally; and

means for maintaining a remote switch database, the remote switch database comprising the MAC address and switch node identification of addresses learned through another switch node.

Claim 80 (New): A stacked switch system according to claim 79, further comprising:

means for receiving a unicast packet with an unknown address; and

means for broadcasting the unicast packet to all ports in the stacked switch system responsive to the means for receiving.

Claim 81 (New): A stacked switch system according to claim 80, further comprising:

means for broadcasting the address by a switch node knowing the address of the unicast packet responsive to the means for broadcasting.

Claim 82 (New): A stacked switch system according to claim 81, the means for maintaining a remote switch database further comprising:

means for updating the remote switch database with the address of the unicast packet and the switch node identification of the switch node knowing the address.

Claim 83 (New): A stacked switch system according to claim 79, further comprising:

means for maintaining a switch identification table containing the switch identification of
switching nodes in the stacked switch system and corresponding ports utilized to reach the
switching nodes.